

ABSTRACT

A process for producing hexafluoroethane, comprising
a step of distilling a crude hexafluoroethane containing
5 chlorine compounds each having two carbon atoms to
distill out hexafluoroethane as a top flow from the top
of a distillation column and separate a hexafluoroethane
mixture containing the chlorine compounds as a bottom
flow from the bottom, and a step of contacting the bottom
10 flow with hydrogen fluoride in the gas phase at a
temperature of 300 to 500°C in the presence of a
fluorination catalyst to fluorinate the chlorine
compounds. This process provides hexafluoroethane which
can be used mainly as a cleaning gas in the production
15 process of a semiconductor device.